

**REMARKS**

Claims 1, 3-45, and 47-55 remain in the application with claims 1, 23, 33, and 43 in independent form. Independent claims 1 and 43 have been amended to clarify that it is the paint composition that is infused with the claimed alkali metal hydroxide. Support for this amendment can be found in paragraph [0020] on page 6, lines 1 and 2, which defines “infusing” as meaning that the alkali metal hydroxide mixes at least partially with the paint composition. Support for this amendment can also be found in paragraph [0021] on page 6, lines 9-11, which indicates that, in an embodiment in which the alkali metal hydroxide is sprayed onto the paint layer in the mold, the alkali metal hydroxide infuses into the paint composition in the mold. Dependent claims 4-6 have been amended simply to maintain consistency with independent claim 1, from which those claims depend, in view of the amendments to independent claim 1. Likewise, claims 44, 45, and 48-50 have been amended to maintain consistency with independent claim 43, from which those claims depend, in view of the amendments to independent claim 43. Claims 14 and 15 have been amended to remedy an inadvertent grammatical error whereby the “polyurethane composition” was inadvertently referred to as “said” polyurethane composition. Claims 2 and 46 were previously cancelled. No new claims are added through the present Amendment. No new matter has been added through the present Amendment.

Claims 5, 33-42, and 49 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claims 1, 3-45, and 47-55 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Mohiuddin (USPN 4,282,285) in view of Salem

et al. (USPN 2,976,202). Applicants have amended claims 1 and 43 to overcome the rejection of these claims under 35 U.S.C. §112. The Applicants respectfully traverse the remaining rejections to the extent that the remaining rejections under 35 U.S.C. §112 and/or 35 U.S.C. §103(a) are not overcome through the amendment to claims 1 and 43.

Importantly, the Applicants note that the amendments to independent claims 1 and 43 are **not** to be view as narrowing amendments. Rather, the amendments to claims 1 and 43 are **broadening** amendments given the Examiner's interpretation of these claims, prior to amendment, as requiring the formation of the paint layer prior to the step of infusing the paint layer with the alkali metal hydroxide. As amended, it is clear that both claims 1 and 43 allow an embodiment of the claimed method in which the alkali metal hydroxide is mixed into a paint composition **prior to** forming the paint layer from the paint composition (as claimed in claims 5 and 49), and further allow an embodiment in which the alkali metal hydroxide is mixed into the paint composition **after** forming the paint layer from the paint composition (as claimed in claims 6 and 50), i.e., after the paint layer is formed from the paint composition but before the paint composition in the paint layer "dries". It is to be appreciated that the paint composition is in existence in the paint layer and, claim 1 is infringed so long as the alkali metal hydroxide can infuse, i.e., at least partially mix, into the paint composition in the paint layer. Each of these embodiments falls under the broad purview of the step of infusing the paint composition with the alkali metal hydroxide.

#### **Rejections Under 35 U.S.C. § 112, Second Paragraph**

The Examiner has recognized that claims 5 and 49 appear to conflict with independent claims 1 and 43, respectively, in their form prior to the instant amendments to

claims 1 and 43. In particular, the conflict arose due to the claimed step of infusing the paint layer because claims 5 and 49 allow for the possibility of mixing the alkali metal hydroxide into the paint composition before a paint layer exists. The Applicants do not dispute this apparent conflict, and the Applicants respectfully submit that the instant amendments to claims 1 and 43 eliminate the conflict created by the subject matter of claims 5 and 49 as explained in the immediately preceding paragraph above.

As to the rejections of claims 33-42 as being indefinite, the Applicants respectfully traverse these rejections. In particular, as set forth above relative to the claim scope of claims 1 and 43, the step of mixing the alkali metal hydroxide into the paint composition may occur prior to or after applying the paint composition to the surface of the mold to form the paint layer. Such mixing, in accordance with claim 33, may occur in the embodiment in which the alkali metal hydroxide is sprayed onto the paint layer. Referring to paragraph [0021] on page 6, lines 9-11, the alkali metal hydroxide may be sprayed onto the paint layer, and the alkali metal hydroxide infuses into the paint composition. Referring to paragraph [0020] on page 6, lines 1 and 2, “infusing” means that the alkali metal hydroxide mixes at least partially with the paint composition. In view of the foregoing, the Applicants respectfully submit that there is nothing unclear about the manner in which the method of claim 33 is claimed, and that claim 33 (as well as claims 34-42 that depend from claim 33) does in fact particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

**Rejections Under 35 U.S.C. § 103(a) Over Mohiuddin in View of Salem et al.**

The Examiner is well aware of the standards set forth for establishing obviousness, as reiterated in *Teleflex v. KSR*. The Applicants respectfully traverse the Examiner's rejection of the instant claims over the combination of Mohiuddin and Salem et al. on the bases that:

- 1) Salem et al. is **not** analogous art to the instant invention;
- 2) Notwithstanding the fact that Salem et al. is **not** analogous art to the instant invention, combination of Mohiuddin and Salem et al. do not render obvious the instant invention as claimed in independent claims 1, 23, 33, and 43 because the combination of Mohiuddin and Salem et al. **does not teach or even suggest** infusing a paint composition with an alkali metal hydroxide, which paint composition is used to form a paint layer in a molded article with a polyurethane layer adhered to the paint layer.

**Salem et al. is Not Analogous Art to the Present Invention**

Notably, as support for combining Mohiuddin and Salem et al., the Examiner has opined that "Mohiuddin and Salem et al. are combinable because they are analogous with respect to improving bonding between a polymeric substrate and a polyurethane layer." While the Applicants disagree with the Examiner's position that Mohiuddin and Salem et al. are analogous, the Applicants respectfully submit that the Examiner has relied upon an erroneous standard for making the determination as to whether or not art is "analogous". The Applicants note that the proper analysis focuses not on whether two prior art references are analogous to each other, **but whether a reference is analogous to the instantly claimed subject matter**. For purposes of evaluating the obviousness of claimed subject

**matter**, one must make certain that a particular reference relied upon constitutes "analogous art." *In re Clay*, 966 F.2d 656, 658-59, 23 U.S.P.Q.2d 1058, 1060-61 (Fed. Cir. 1992). In determining whether a reference is analogous prior art, the Federal Circuit espoused a two-prong test inquiring:

- (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and
- (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.

*In re Clay*, 966 F.2d at 658-59, 23 U.S.P.Q.2d at 1060-61.

Relevant to the first prong, i.e., whether or not Salem et al. is from the same field of endeavor as the instant invention, the present invention relates to a method of making a molded article that includes a ***paint layer*** whereby adhesion is increased between a polyurethane layer and the paint layer **by infusing the paint composition with an additive**, namely, an alkali metal hydroxide. With regard to claims 1, 23, and 33, in particular, these claims relate to a molded article in which a paint layer is formed in the article through an in-mold coating process. On the other hand, Salem et al. pertains to a method of bonding a polyurethane composition to synthetic fabrics (refer to column 1, lines 32-35). **Fabrics are completely different from paint layers, and Salem et al. is clearly outside of the field of forming molded articles with a paint layer, especially methods of forming articles**

**through an in-mold coating process.** As such, Salem et al. is not from the same field of endeavor as the instant invention.

As to the second prong, Salem et al. is **not** reasonably pertinent to the problem with which the inventors of the instant invention were involved. The inventors of the instant invention were involved with the problem of adhering **a paint layer** to a polyurethane layer in a molded article by modifying the paint composition itself. It is clear upon examination that Salem et al. aims to improve adhesion between polyurethane and an element (polymeric fabric) that is completely different from a paint layer, and aims to improve adhesion **not** through modification of the composition used to form the fabric but rather through application of another layer altogether upon the fabric, with other layer promotes adhesion with the polyurethane. In particular, **Salem et al. is drawn to the use of a resin-forming material as a coating on a pre-formed fabric to effectively provide a surface that is more amenable to bonding to polyurethane than the material of the fabric, thereby resulting in enhanced adhesion between the fabric and the polyurethane layer.** The fact that Salem et al. is not reasonably pertinent to the problem addressed by the instant invention is evident by the fact that **the fabrics of Salem et al. are already formed at the time of treatment with the resin-forming material (unlike the instant invention, which involves mixing an additive into the paint composition itself), and Salem et al. is not pertinent to problems of modifying the composition of the fabric to enhance bonding capability of the fabrics themselves.**

Because Salem et al. is neither from the same field of endeavor of the present invention, nor reasonably pertinent to the particular problem with which the inventors of the present

invention were involved, Salem et al. cannot be relied upon to provide a basis for a rejection of the present claims under 35 U.S.C. §103.

**Notwithstanding the Non-Analogous Nature of Salem et al. to the Instant Invention, Combination of Mohiuddin et al. and Salem et al. Fail to Render the Instant Invention Obvious**

The Applicants provide the following summary of the relevant standards that the Examiner must adhere to when attempting to establish obviousness of an invention. 35 U.S.C. §103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007). Further, the question of obviousness is resolved on the basis of the four underlying factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). See also KSR, 127 S.Ct. at 1734, 82 USPQ2d at 1391. In *KSR*, the Court noted that “[t]o facilitate review, this analysis should be made explicit.” KSR, 127 S.Ct. at 1740-41, 82 USPQ2d at 1396.

In *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *id.* at 1739, 82 USPQ2d at 1395, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248.” *KSR*, 127 S.Ct. at 1739, 82 USPQ2d at 1395 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12 (1966) (emphasis added)), and reaffirmed

principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” (Emphasis added) *Id.* The operative question in this “functional approach” is “whether the improvement is **more than the predictable use of prior art elements according to their established functions.**” (Emphasis added) *Id.* Further still, it remains true that, to establish *prima facie* obviousness of a claim, the prior art must teach or suggest all the claim limitations. See *MPEP 2142 and 2143.* Further, MPEP 2142 mandates that “...impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.”

Relative to the combination of Mohiuddin with Salem et al., the Applicants respectfully assert that the Examiner has failed to consider these references as a whole and, upon consideration of Mohiuddin and Salem et al. as a whole, there is no teaching or suggestion of all claim limitations of claims 1, 23, 33, and 43 within the combined references. In particular, the combination of Mohiuddin and Salem et al. fails to reasonably teach or suggest infusing a paint composition with an alkali metal hydroxide.

In relation to the elements claimed in amended independent claims 1, 23, 33, and 43, the Examiner relies on Mohiuddin for teaching a method of making a molded article that includes all claim elements of claims 1, 23, 33, and 43 except the step of infusing a paint composition with an alkali metal hydroxide. To supplement the deficiencies of the disclosure and teachings of Mohiuddin, the Examiner then relies, in error, on the teachings of Salem et al. to conclude that one of skill in the art would use alkali metal hydroxide catalysts taught for use in the resin-forming material of Salem et al. in the same manner in

which the alkali metal hydroxide is used in the instant claims. Simply stated, there is nothing within Salem et al. that would suggest to infuse a paint composition with an alkali metal hydroxide.

The Examiner has provided no rationale whatsoever as to why one of skill in the art, which knowledge of both Mohiuddin and Salem et al., would be taught to use the catalyst of the resin-forming material in Salem et al. in the paint composition of Mohiuddin except for the overly conclusive statement that “both references teach the use of a reaction promoter/resin-forming catalyst to improve adhesion”. The Examiner’s rationale is fatally incomplete and fails to take into account the teachings of Mohiuddin and Salem et al. as a whole.

An artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the invention, i.e., insufficient adhesion between a paint layer and a polyurethane layer, and with no knowledge of the claimed invention, would not have selected the potassium hydroxide from Salem et al. for use in Mohiuddin because Mohiuddin and Salem et al. pertain to completely different endeavors. As set forth above, Salem et al. is drawn to the use of a resin-forming material as a coating on a pre-formed fabric wherein potassium hydroxide is used as a catalyst to promote polymerization of the resin-forming material. The Examiner has failed to explain, nor can the Examiner explain, how one of skill in the art would glean from Salem et al. to isolate the alkali metal hydroxide catalyst used for polymerization of the resin-forming material, in particular, and then mix that catalyst into the paint composition taught by Mohiuddin, as opposed to including the alkali metal hydroxide in a layer that is completely separate from the

**paint layer, with the expectation that such a step would improve adhesion between the paint layer and the polyurethane layer.** Such teachings are clearly absent from the combination of Mohiuddin and Salem et al.

Further, Mohiuddin discloses a series of polyurethane catalysts for the purpose of providing active sites in the paint layer which act to bond the paint layer to the polyurethane layer. Conversely, Salem et al. discloses treating the surface of fabric with the resin-forming material, which resin-forming material is better able to adhere to polyurethane than the material of the fabric itself. Again, one of skill in the art, when faced with the problem of adhering a paint layer to a polyurethane layer in a molded article would not have arrived at the instant invention, as claimed in the independent claims, upon studying the teachings of Mohiuddin and Salem et al.

In summary, Salem et al. is not analogous art to the present invention and, notwithstanding this fact, one of skill in the art would **not** arrive at the instant invention upon studying the disclosure and teachings of Mohiuddin and Salem et al. As such, the Examiner cannot establish a *prima facie* case of obviousness relative to independent claims 1, 23, 33, and 43 of the present application.

In view of the amendments to claims 1, 23, 33, and 43, as well as the remarks set forth above, it is respectfully submitted that the rejections under 35 U.S.C. §112 of claims 1 and 43 have been overcome and that, to the extent that remaining rejections under 35 U.S.C. §112 and §103(a) have not been overcome by the instant amendments, these rejections are improper and must be withdrawn. Thus, the Applicants respectfully submit that claims 1, 23, 33, and 43 are in condition for allowance, which allowance is respectfully solicited.

Furthermore, the remaining claims depend either directly or indirectly from the novel and non-obvious features of these independent claims such that these claims are also allowable.

The Commissioner is authorized to charge our deposit account no. 08-2789 for any additional fees or credit the account for any overpayment.

Respectfully submitted,

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